



PATENT

Attorney Docket No. 463037-00227
Dorsey File No. A-69306-1/RMS/RMK/SPL

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

TAO et al.

Serial No.: 09/847,113

Filing Date: May 1, 2001

For: *TARGET ANALYTE DETECTION
USING ASYMMETRICAL SELF-
ASSEMBLED MONOLAYERS*

Examiner: Jeffrey Siew

Art Unit: 1637

CERTIFICATE OF MAILING

I hereby certify that this correspondence and its listed enclosures are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

Date: 12/19/03
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Steve Lendaris

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

In satisfaction of the duty of disclosure under 37 C.F.R. § 1.56, and in accordance with the provisions of 37 C.F.R. §§ 1.97 and 1.98, Applicants wish to draw the attention of the U.S. Patent and Trademark Office to the reference cited on the accompanying substitute for form PTO-1449. Copies of the references are enclosed herewith.

Further, in accordance with the provisions of 37 C.F.R. § 1.98(a)(3) and MPEP § 609(III)(A)(3), Applicant submits that reference no. B6 is not in the English language and directs the Examiner's attention to the English language abstract of same enclosed herewith for a concise statement as to its relevance.

U.S. Serial No.: 09/847,113
Filing Date: May 1, 2001

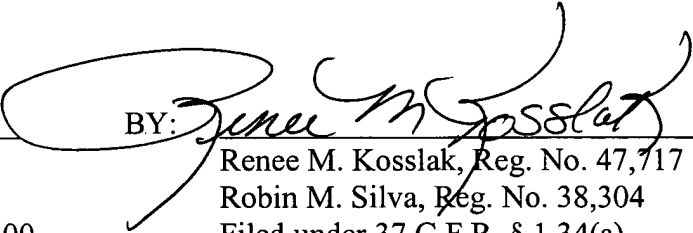
None of the foregoing references is believed to disclose the invention as claimed. Nothing herein shall constitute an admission concerning the contents of any of the cited references, nor shall the inclusion of a reference herein be considered an admission that the reference constitutes prior art against the invention claimed in the above-identified application. Submission of the present document shall not be construed as an admission that a search has been made or that better art does not exist.

Pursuant to 37 C.F.R. §1.97(c), enclosed is a check in the amount of \$180.00 as set forth in 37 C.F.R. §1.17(p). While no further fee is believed to be due, if this belief is in error, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-2319 (Our Order No. 463037-00227 (A-69306-1/RMS/RMK/SPL)).

Please direct any calls in connection with this application to the undersigned at (415) 544-7041.

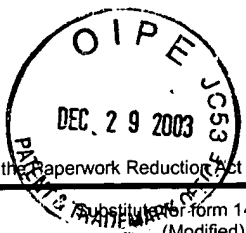
Respectfully submitted,
DORSEY & WHITNEY LLP

Dated: 12/19/03
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Renee M. Kosslak, Reg. No. 47,717 for
Robin M. Silva, Reg. No. 38,304
Filed under 37 C.F.R. § 1.34(a)

Customer Number: 32940

Attachments:
Form PTO/SB/8A-B, Substitute for form PTO 1449
Forty-one (41) References



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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known				
			Application Number		09/847,113		
			Filing Date		May 1, 2001		
			First Named Inventor		CHUNLIN TAO		
			Group Art Unit		1637		
			Examiner Name		Jeffrey Siew		
Sheet	1	of	3	Attorney Docket Number		A-69306-1	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	U.S. Patent Document Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	4,819,658	04-11-1989	Kolodner	
	A2	5,032,216	07-16-1991	Felten	
	A3	5,200,471	04-06-1993	Coleman et al.	
	A4	5,519,635	05-21-1996	Miyake et al.	
	A5	5,585,646	12-17-1996	Kossovsky et al.	
	A6	5,763,191	06-09-1998	Knoll et al.	
	A7	5,795,953	08-18-1998	Kim et al.	
	A8	5,834,224	11-10-1998	Ruger et al.	
	A9	5,942,397	08-24-1999	Tarlov et al.	
	A10	6,020,047	02-01-2000	Everhart	
	A11	6,090,933	07-18-2000	Kayyem et al.	
	A12	6,096,497	08-01-2000	Bauer	
	A13	6,256,155 B1	07-03-2001	Nagaoka	
	A14	6,291,188 B1	09-18-2001	Meade et al.	

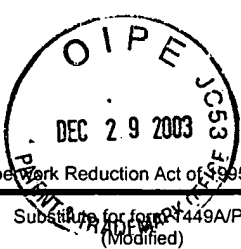
FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.	Foreign Patent Document Country Code ² Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	B1	WO 99/57319 A1	11-11-1999	Clinical Micro Sensors		
	B2	WO 98/57159 A1	12-17-1998	Clinical Micro Sensors		
	B3	WO 95/34816 A1	12-21-1995	Pharmacia Biosensor AB		
	B4	WO 98/20162 A3	05-14-1998	Clinical Micro Sensors		
	B5	WO 96/10178 A1	04-04-1996	Pharmacia Biosensor AB		
	B6	EP 0 664 452	07-26-1995	Boehringer Mannheim GMBH	Abstract Only	

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Substitute for form 449A/PTO (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known	
			Application Number	09/847,113
Sheet 2 of 3			Filing Date	May 1, 2001
			First Named Inventor	CHUNLIN TAO
			Group Art Unit	1637
			Examiner Name	Jeffrey Siew
			Attorney Docket Number	A-69306-1

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	† ⁶
	C1	BAIN et al., "Formation of Monolayers by the Spontaneous of Thiols on Gold: Variation in the Length of the Alkyl Chain," <i>J. Am. Chem. Soc.</i> , 1989, 111:7164-7175.	
	C2	BAMDAD, C. "A DNA Self-Assembled Monolayer for the Specific Attachment of Unmodified Double - or Single Stranded DNA," <i>Biophysical Journal</i> , 1998, 75:1997-2003.	
	C3	CHE, G. et al., "Voltammetry of defect sites at a self-assembled monolayer on a gold surface," <i>J. of Electroanalytical Chemistry</i> , 1998, 453: 9-17.	
	C4	COLVIN, et al., "Semiconductor Nanocrystals Covalently Bound to Metal Surfaces with Self-Assembled Monolayers", <i>J. Am. Chem. Soc.</i> , 1992, 114:5221-5230.	
	C5	<i>Commerce Business Daily Issue</i> , September 26, 1996, PSA#1688.	
	C6	DELAMARCHE, E. et al. "Immobilization of Antibodies on a Photoactive Self-Assembled Monolayer on Gold", <i>Langmuir</i> , 1996, 12:1997-2006.	
	C7	GAFNI, et al., "Biomimetic Ion-Binding Monolayers on Gold and Their Characterization by AC-Impedance Spectroscopy", <i>Chem. Eur. J.</i> , 1996, 2:759-766.	
	C8	GAO et al., "Self-assembled conducting polymer monolayers of poly(3-octylthiophene) on gold electrodes," <i>Synthetic Metals</i> , 1995, 75:5-10.	
	C9	HSUEH et al., "Electrochemically Directed Self-Assembly on Gold," <i>Angew. Chem. Int. Ed.</i> , 2000, 39(7): 1227-1230.	
	C10	KUMAR et al., "Patterning Self-Assembled Monolayers: Applications in Materials Science," <i>Langmuir</i> , 1994, 10:1498-1511.	
	C11	LAIBINIS et al., "Orthogonal Self-Assembled Monolayers: Alkanethiols on Gold and Alkane Carboxylic Acids on Alumina," <i>Reports</i> , August 25, 1989, 845-847.	
	C12	LOFAS et al., "A novel hydrogel matrix on gold surfaces in surface plasmon resonance sensors for fast and efficient covalent immobilization of Ligands," <i>J. Chem. Soc. Chem. Commun.</i> , 1990, 1526-1528.	
	C13	MCGOVERN et al., "Role of Solvent on the Silanization of Glass with Octadecyltrichlorosilane," <i>Langmuir</i> , 1994, 10:3607-3614.	
	C14	PARIKH et al., "An Intrinsic Relationship Between Molecular Structure in Self-Assembled n-Alkylsiloxane Monolayers and Deposition Temperature," <i>J. Phys. Chem.</i> , 1994, 98:7577-7590..	
	C15	PRIME et al., "Adsorption of Proteins onto Surfaces Containing End-Attached Oligo(ethylene oxide): A Model System Using Self-Assembled Monolayers," <i>J. Am. Chem. Soc.</i> , 1993, 115:10714-10721.	

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Sheet 3 of 3			Filing Date	May 1, 2001
			First Named Inventor	CHUNLIN TAO
			Group Art Unit	1637
			Examiner Name	Jeffrey Siew
			Attorney Docket Number	A-69306-1

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	C16	SCHIERBAUM et al., "Molecular Recognition by Self-Assembled Monolayers of Cavitant Receptors," <i>Science</i> , September 2, 1994, 265: 1413-1415.	
	C17	SHNEK et al., "Specific Protein Attachment to Artificial Membranes via Coordination to Lipid-Bound Copper (II)," <i>Langmuir</i> , 1994, 10:2382-2388.	
	C18	SIGAL et al., "A Self-Assembled Monolayer for the Binding and Study of Histidine-Tagged Proteins by Surface Plasmon Resonance," <i>Anal. Chem.</i> , 1996, 68(3):490-497.	
	C19	SPINKE et al., "Molecular Recognition at Self-Assembled Monolayers: The Construction of Multicomponent Multilayers," <i>Langmuir</i> , 1993, 9:1821-1825.	
	C20	SPINKE et al., "Molecular recognition at self-assembled monolayers: Optimization of surface functionalization," <i>J. Chem. Phys.</i> , November 1, 1993, 99(9):7012-7019.	
	C21	WHITESIDES et al., "Wet Chemical Approaches to the Characterization of Organic Surfaces: Self-Assembled Monolayers, Wetting, and the Physical-Organic Chemistry of the Solid-Liquid Interface," <i>Langmuir</i> , 1990, 6:87-96.	

Examiner Signature		Date Considered	
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